effective combination anti-retroviral therapy is the new standard of care.

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REFERENCES

Carpenter CC, Fischl MA, Hammer SM, Hirsch MS, Jacobsen DM, Katzenstein et al. Antiretroviral therapy for HIV infection in 1997: updated recommendations of the international AIDS society—USA panel. JAMA 1997; 277:1962–1969

Ho DD, Neumann AU, Perelson AS, et al. Rapid turnover of plasma virions and CD4+ lymphocytes in HIV-1 infection. Nature 1995; 373:123–126

Mellors JW, Rinaldo CR, Gupta P, et al. Prognosis in HIV-1 infection predicted by the quantity of virus in plasma. Science 1996; 272:1167–1170

O'Brien WA, Hartigan PM, Martin D, et al. Changes in plasma HIV-RNA and CD4+ lymphocyte counts and the risk of progression to AIDS. N Engl J Med 1996; 334:426–431

Connors M, Kovacs JA, Krevath S, et al. HIV infection induces changes in CD4+ T-cell Phenotype and Deletions within the CD4+ T-cell repertoire that are not immediately restored by antiviral or immune-based therapies. Nat Med 1997; 3:533–540

Advances in Allergic Rhinitis Pharmacotherapy

A recent survey shows the prevalence of allergic rhinitis to be at least 14% in the US population. Therapeutic options for allergic rhinitis are threefold: pharmacotherapy, immunotherapy, and environmental control. Pharmacotherapy has provided the major advances over the last 10 years with regard to improved efficacy and safety in the treatment of this disease.

Five agents are now available in the category of oral second-generation antihistamines: terfenadine, astemizole, loratadine, cetirizine, and fexofenadine. These histamine receptor antagonists are less sedating than their first-generation predecessors, and thus are well tolerated by patients. Terfenadine and astemizole, however, can cause QT prolongation and, in rare cases, a serious and potentially fatal cardiac arrhythmia. The Food and Drug Administration has therefore recommended removal of terfenadine from the market. The other three agents do not appear to have this property. Advantages of the second-generation antihistamines include a complete lack of somnolence and mental impairment (astemizole, loratadine, fexofenadine), the convenience of once-a-day (astemizole, loratadine, cetirizine) or twice-a-day (terfenadine, fexofenadine) dosing, and, consequently, improved patient acceptance and compliance. Liquid preparations and pediatric indications (age 6 years and up) now exist for loratadine and cetirizine. Certain antihistamine-decongestant combination agents are on the market, although patients who use them need to be warned about potential stimulatory side effects from the decongestant. Second-generation antihistamines have also recently become available for topical use. Azelastine hydrochloride, a moderately effective intranasal spray, is particularly useful in decreasing nasal itching; mild sedation occasionally occurs due to its systemic absorption via the nasal mucosa.

The well-proven potency, efficacy, and safety of intranasal corticosteroids have made them the drugs of choice for any patient with frequent, chronic, or severe symptoms of allergic rhinitis. A number of topical agents are available (beclomethasone diproprionate, budesonide, flunisolide, fluticasone, triamcinolone, dexamethasone). Comparison studies evaluating topical steroids versus oral antihistamines repeatedly show intranasal corticosteroids to be superior. Unlike all other pharmacotherapy agents, when used alone, intranasal corticosteroids can improve all four of the major symptoms of allergic rhinitis (itch, rhinorrhea, sneeze, and congestion). Their use has increased for a variety of reasons, including a better understanding of the inflammatory nature of allergic rhinitis and the decision to introduce them earlier and maintain them longer when allergen exposure or symptoms continue. They are available as either a wet aqueous spray or a dry aerosol spray, making them convenient and well accepted by most patients. Differences in clinical efficacy between agents is minimal, so selection of a specific nasal steroid usually depends on cost, formulary availability, and patient preference (aqueous or aerosol). At recommended doses, intranasal corticosteroids are free of significant adverse effects.

Another topically active anti-inflammatory agent, cromolyn, has been found to be so safe after years of use that it was recently made available without a prescription. Cromolyn is an nonsteroidal nasal spray whose mode of action is primarily preventive via mast cell stabilization and, overall, less effective than nasal corticosteroids.

Oral anticholinergic therapy has been tried for years as therapy for allergic rhinitis, but adverse effects (such as dry mouth and eyes) have limited its use. A topical anticholinergic medication has recently become available that circumvents the side effects of the oral form: ipratroprium bromide. This nasal spray, available in two strengths (0.03 and 0.06%), appears to be an effective adjunct in controlling rhinorrhea.

New agents and approaches hold additional promise for the treatment of allergic rhinitis. The leukotriene receptor and pathway antagonists, available for asthma, are being tested as therapeutic agents in oral and topical forms. Monoclonal antibodies to IgE and to cytokines important in allergic inflammation are still in early experimental stages but will likely be tried as therapy for this disease.

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REFERENCES

Fokkens WJ, Godthelp T, Holm AF, Blom H, and Klein-Jan A. Allergic rhinitis and inflammation: the effect of nasal corticosteroid therapy. Allergy 1997; 52 (Suppl):S29–S32

Meltzer E, Welch M. Adverse effects of H1-receptor antagonists in the central nervous system. In: Simons E, editor. Histamine and H1-Receptor Antagonists in Allergic Disease. New York: MarcelDekker; 1996, pp 357–382

The prevalence and medical and economic impact of allergic rhinitis in the United States (Supplement). J Allergy Clin Immunol 1997; 99 (Suppl): S807–S828